We claim:

1. A method for routing signals in a network comprising a backbone and a plurality of peering partners, wherein each peering partner is connected to the backbone, the method comprising:

developing an address space map of the network, wherein the address space map associates topological regions of the network with a particular set of signal addresses; and

using the address space map to route signals on the backbone.

2. The method of claim 1, wherein signals are routed on the backbone using cold potato routing.

3. The method of claim 2, wherein cold potato routing carries a signal on the backbone to the backbone connection closest to the topological region of the network corresponding to the signal's address.

4. The method of claim 1, wherein the peering partners route signals to the backbone using hot potato routing.

5. The method of claim 4, wherein hot potato routing places a signal on the backbone connection closest to the topological region of the network corresponding to the signal's address.

6. The method of claim 1, wherein using the address space map to route signals further comprises:

injecting a route preference for a route into the network; and

deaggregating a route that is aggregated across a plurality of topological regions of the network according to the address space map.

7. A method for modifying routing using an address space map of a system having a plurality of networks connected to a backbone via a plurality of entry points, the method comprising:

monitoring the entry points of a plurality of messages arriving from the plurality of networks;

correlating the plurality of message entry points with their associated message source address ranges to develop an address space map of the system; and

using the address space map to implement modified routing.

8. The method of claim 7, wherein using the address space map to implement modified routing further comprises:

subject to a determination that the amount of messages from a first source address range arriving from a first path exceeds a first threshold amount, preferencing all messages to a destination address within the first source address range to travel via the first path.

9. The method of claim 8, wherein using the address space map to implement modified routing further comprises:

subject to a determination that the first path has not been preferenced, and further subject to a determination that the amount of messages from the first source address range arriving from the first path exceeds a second threshold amount, deaggregating a published route associated with the first source address range.

10. The method of claim 9, wherein the first source address range is a group of addresses corresponding to the same Internet Protocol address and mask.

11. The method of claim 9, wherein the first threshold is a preset percentage of the total amount of messages from a first source address range.

12. The method of claim 9, wherein the second threshold is a preset percentage of the total amount of messages from a first source address range.

13. A method for performing traffic routing management in a network, the method comprising:

monitoring source address ranges for a plurality of signals;

monitoring arrival network connection points for the plurality of signals; and

developing an address space map of the network.

14. The method of claim 13, further comprising:

using the address space map to route a signal to a network connection point closest to a destination address range of the signal.

15. The method of claim 14, wherein using the address space map further comprises:

preferencing a route table route that is not selected naturally according to a network routing protocol and is not prohibited according to a network configuration parameter, subject to a determination that the route exceeds a signal quantity threshold.

16. The method of claim 15, wherein the network routing protocol is the Border Gateway Protocol.

17. The method of claim 15, wherein preferencing a route table route includes modifying the local preferences for the route.

18. The method of claim 15, wherein the signal quantity threshold is a preset percentage of the total number of signals from the source address range corresponding to the route.

19. The method of claim 15, wherein the signal quantity threshold is a preset number of signals.

20. The method of claim 14, wherein using the address space map further comprises:

injecting a new route within the source address range of a signal into the network.

21. The method of claim 20, wherein the step of injecting a new route includes issuing a route announcement using a Border Gateway Protocol session from an external system.

22. The method of claim 14, wherein using the address space map further comprises reconciling differences between the address map and existing routes in the network.

23. The method of claim 13, wherein each source address range is an Internet Protocol address including a prefix length.

24. The method of claim 13, wherein the network connection point is an interface.

25. The method of claim 13, wherein developing the address space map of the network further comprises:

collecting route entries from a route table on a router in the network; and

compiling signal traffic statistics entries on the monitored plurality of signals passing through the router in the network, wherein each signal traffic statistics entry includes a measure of the quantity of signals corresponding to a source address range.

26. The method of claim 25, further including correlating each signal traffic statistics entry with a route entry.

27. The method of claim 27, wherein each signal is an Internet Protocol packet.

28. The method of claim 25, wherein each signal traffic statistics entry further comprises:

an Internet Protocol address;

a prefix length for the Internet Protocol address range; and

an associated route entry.

29. The method of claim 25, wherein each route entry comprises an advertised Border Gateway Protocol route.

30. The method of claim 13, wherein the plurality of signals monitored includes the signals sent within the network.

31. The method of claim 13, wherein the plurality of signals monitored includes a sampled portion of the signals sent within the network.

32. The method of claim 13, wherein the plurality of signals monitored includes:

a set of signals sent within the network; and

a set of signals generated to fill in portions of the address space map of the network.

33. The method of claim 13, wherein the plurality of signals monitored includes a set of signals generated to provide substantially equal signal coverage of the network.

34. The method of claim 13, wherein monitoring is performed automatically and automatically used to develop the address space map.

35. The method of claim 14, wherein the process of using the address space map is performed automatically.

36. The method of claim 15, wherein preferencing a route table route is performed automatically.

37. The method of claim 20, wherein injecting a new route is performed automatically.

38. The method of claim 25, wherein compiling signal traffic statistics is performed automatically.

39. A computer program product for performing traffic routing management in a network, the computer program product comprising:

a computer readable medium that stores program code including:

program code that monitors source address ranges for a plurality of signals;

program code that monitors arrival network connection points for the plurality of signals; and

program code that develops an address space map of the network.

40. The computer program product of claim 39, further comprising:

program code that uses the address space map to route a signal to a network connection point topologically closest to a destination address range of the signal.

41. The computer program product of claim 40, wherein program code that uses the address space map further comprises:

program code that preferences a route table route that is not selected naturally according to a network routing protocol and is not prohibited according to a network configuration parameter, subject to a determination that the route exceeds a signal quantity threshold.

42. The computer program product of claim 40, wherein program code that uses the address space map further comprises:

program code that injects a new route within the source address range of a signal into the network.

43. The computer program product of claim 40, wherein program code that uses the address space map further comprises program code that reconciles differences between the address map and existing routes in the network.

44. The computer program product of claim 39, wherein program code that develops the address space map of the network further comprises:

program code that collects route entries from a route table on a router in the network; and

program code that compiles signal traffic statistics entries on the monitored plurality of signals passing through the router in the network, wherein each signal

traffic statistics entry includes a measure of the quantity of signals corresponding to a source address range.

45. The computer program product of claim 44, further including program code that correlates each signal traffic statistics entry with a route entry.

46. A method for managing the routing of signals in a network, comprising:

receiving route entries from a route table in the network;

receiving Internet Protocol statistics data entries on signals flowing through one or more routers on the network, wherein each Internet Protocol statistics data entry includes a measure of the quantity of signals corresponding to a signal source address range;

developing an address space map of the network using the route entries and Internet Protocol statistics data entries; and

implementing the address space map.

47. The method of claim 46, wherein implementing the address space map comprises selecting a preferred route.

48. The method of claim 47, wherein selecting the preferred route comprises:

selecting as the preferred route a route entry that is not selected naturally according to a network routing protocol and is not prohibited according to a network configuration parameter, subject to a determination that the route exceeds a signal quantity threshold.

49. The method of claim 48, wherein the network routing protocol is the Border Gateway Protocol.

50. The method of claim 47, wherein implementing the address space map further comprises selecting a deaggregation route.

51. The method of claim 50, wherein selecting the deaggregation route comprises:

selecting as the deaggregation route a route corresponding to a Internet Protocol statistics data entry, wherein the route is more specific than the route table route currently announced to the network.

52. The method of claim 51, wherein the more specific route has a longer prefix length.

53. A computer program product for managing the routing of signals in a network, the computer program product comprising:

a computer readable medium that stores program code including:

program code that receives route entries from a route table in the network;

program code that receives Internet Protocol statistics data entries on signals flowing through one or more routers on the network, wherein each Internet Protocol statistics data entry includes a measure of the quantity of signals corresponding to a signal source address range;

program code that develops an address space map of the network using the route entries and Internet Protocol statistics data entries; and

program code that implements the address space map.

54. The computer program product of claim 53, wherein program code that implements the address space map comprises program code that selects a preferred route.

55. The computer program product of claim 54, wherein the program code that selects the preferred route comprises:

program code that selects as the preferred route a route entry that is not selected naturally according to a network routing protocol and is not prohibited according to a network configuration parameter, subject to a determination that the route exceeds a signal quantity threshold.

56. The computer program product of claim 54, wherein program code that implements the address space map further comprises program code that selects a deaggregation route.

57. The computer program product of claim 56, wherein the program code that selects the deaggregation route comprises:

program code that selects as the deaggregation route a route corresponding to a Internet Protocol statistics data entry, wherein the route is more specific than the route table route currently announced to the network.

58. In a system comprising a backbone connected to a content provider and a first network connected to a content user, wherein the first network is connected by one or more connections to a backbone, a method for routing traffic between the content provider and the content user comprising:

placing the content provider traffic onto the backbone;

routing the traffic on the backbone to the first network; and

placing the traffic onto the connection between the first network and the backbone that is topologically closest to the content user.

59. The method of claim 58, wherein the content provider is connected to the backbone via an access point.

60. The method of claim 58, wherein the content provider is a World Wide Web content provider.

61. The method of claim 58, wherein the system further includes a second network connected to a content user, the method further including:

determining whether traffic was sent to the system via the first network or the second network and selecting the network sending traffic to the system;

routing the traffic on the backbone to the selected network; and

placing the traffic onto the connection between the selected network and the backbone that is topologically closest to the content user.

62. A system for routing network traffic, comprising:

a backbone;

a plurality of points of presence on the backbone, wherein each point of presence collects traffic data and sends the traffic data to a network operations center; and

a network operations center coupled to the backbone for receiving the traffic data, analyzing the traffic data, and automatically modifying the routing policy of the system based upon the analyzed data.

63. The system of claim 62, further including:

a plurality of peering partner networks, each peering partner network connected to the backbone at one or more points of presence.

64. The system of claim 63, wherein each peering partner network is paid a fee for all traffic the peering partner network receives from the backbone.

65. The system of claim 64, wherein at least one peering partner network provides transit connections to other Internet service providers that are not part of a peering partner network.

66. The system of claim 62, further including:

one or more peering partners networks, each peering partner network connected to the backbone at nine or more points of presence by an OC-3 line connection.

67. The system of claim 62, wherein each point of presence comprises:

a router for routing traffic between the backbone and one or more peering partner networks, and wherein the router further generates Internet Protocol statistics reports and reads the route tables and sends the Internet Protocol statistics reports and the route tables to a computer; and

the computer for receiving the Internet Protocol statistics reports and the route tables and sending the Internet Protocol statistics reports and the route tables to the network operations center.

68. The system of claim 67, wherein the computer further correlates the Internet Protocol statistics reports and the route tables.

69. The system of claim 67, wherein the computer further receives preferred routes from the network operations corresponding to a new routing policy.

70. The system of claim 69, wherein the computer further compares the new routing policy to an existing routing policy, and implements the differences between the new and the existing routing policies.

71. The system of claim 62, wherein the backbone is a Dense Wave Division Multiplexing system.

72. The system of claim 62, wherein each point of presence automatically collects traffic data and the network operations center automatically analyzes the traffic data.